

WHAT IS CLAIMED IS:

1. An oscillation/echo canceller system comprising a hollow main body having an insert section provided with an opening and adapted to be inserted into the canal of the ear, a microphone for taking sound signals being transmitted as air vibrations into the main body by way of the opening of the insert section and a speaker realized as a tightly closed object except a sound emitting hole and adapted to boost the sound signals received from an external transmitter/receiver, the oscillation/echo canceller system being designed to establish a bidirectional communication with an external transmitter/receiver when the insert section is removably inserted into an ear canal;

the speaker being arranged with its sound emitting hole directed to the opening of the insert section and provided with an even number of sound emitting canals formed between the sound emitting hole and the opening and having identical lengths and identical inner diameters, the even number being equal to two or even number times of two;

the microphone being arranged more remotely from the opening of the insert section than the sound emitting hole of the speaker, the sound collecting canal of the microphone for collecting sounds from the opening being made of a material incapable of directly collecting sounds from the sound emitting canals of the speaker.

2. The system according to claim 1, wherein the sound emitting canals of the speaker and the sound collecting canal of the microphone extend linearly and are located within the area defined by the inner diameter of the opening of the insert section.

3. The system according to claim 1, wherein the surrounding wall

of the sound collecting canal of the microphone is formed by a resilient elastic body that is made of a resilient material such as rubber.

4. The system according to claim 1, wherein the surrounding walls
5 of the sound emitting canals of the speaker are made of synthetic resin.

5. The system according to claim 1, wherein the electric wires
extending from the speaker and the microphone are connected to an
earphone jack to be inserted into the earphone jack hole of the
10 external transmitter/receiver.

6. The system according to claim 1, further comprising:
means for reducing the output of the speaker to not higher
than 70% of its output level and the output of the microphone to
not higher than one tenth of its output level.

15 7. The system according to claim 6, wherein the output reduction
means is an output reduction circuit arranged on the electric wires
or in the main body.